

**REMARKS**

Claims 123 and 130-145 are pending in the subject application. Applicants hereinabove have amended claims 123, 132, 134, and 135. Accordingly, upon entry of this Amendment, claims 123 and 130-145, as amended, will still be pending and under examination.

Applicants maintain that the amendments to the specification and to claims 123, 132, 134, and 135 do not raise any issue of new matter, and that these claims, as amended, are fully supported by the specification as originally filed.

Support for the claim amendments is found, *inter alia*, in the specification as follows: **Claims 123, 132, 134, and 135**: page 53, line 35 to page 54, line 1, and page 58, lines 27-28.

In view of the comments set forth below, applicants maintain that the grounds of the Examiner's rejections made in the February 22, 2005 Office Action have been overcome, and respectfully request that the Examiner reconsider and withdraw these grounds of rejection.

**February 16, 2005 Examiner's Interview**

On February 16, 2005, the undersigned had a telephonic interview with Examiner Holleran. Applicants again wish to thank the Examiner for her time and consideration during this interview.

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During the interview, the Examiner indicated that the claims 123 and 130-145 are allowable but for the need of a Terminal Disclaimer over U.S. Serial No. 08/196,154, and clarification of claims 123, 132, 134, and 135, specifically, amending "ganglioside:KLH molar ratio" to recite --ganglioside derivative:KLH molar ratio--.

Applicants have carefully reviewed the Examiner's suggestions regarding filing a Terminal Disclaimer over U.S. Serial No. 08/196,154 and amending claims 123, 132, 134, and 135, and have incorporated the Examiner's suggestions in this Amendment. Applicants maintain that this Amendment places this application in condition for allowance and look forward to receiving from the Examiner a communication to this effect.

**Rejections Withdrawn In The February 22, 2005 Office Action**

The Examiner stated that the rejection of claims 123, 124, and 130-145 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement, is withdrawn in view of the amendment to the claims.

The Examiner stated that the rejection of claims 123, 124, and 130-145 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention, is withdrawn in view of the amendment to the claims and specification, and applicants' remarks on the record with regard to QS-21.

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Serial No.: 08/477,147  
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The Examiner stated that the rejection of claims 123, 124, 134, 135, and 137-145 under 35 U.S.C. §103(a) as being unpatentable over Wiegand (U.S. Patent No. 5,599,914, issued February 4, 1997) in view of Jennings (U.S. Patent No. 4,356,170, issued October 26, 1982), in view of Neurath (U.S. Patent No. 4,591,552, issued May 27, 1986), in view of Ratcliff (U.S. Patent No. 5,344,870, issued September 6, 1994), in view of Patrick (U.S. Patent No. 4,652,629, issued March 24, 1987), in view of Blincko (U.S. Patent No. 5,256,409, issued October 26, 1993), in view of Marciani (Vaccine, 9:89-96 (February 1991)), in view of Tsuchida (Journal of the National Cancer Institute, 78:45-54 (1987)), in view of Ritter (Seminars in Cancer Biology, 2:401-409 (1991)) and further in view of Livingston (Proc. Natl. Acad. Sci. USA, 84:2911-2915 (May 1987)), is withdrawn in view of applicants' persuasive arguments that one of ordinary skill in the art would not have had a reasonable expectation of success in using QS-21 to increase the immunogenicity of a ganglioside conjugate in view of the teachings of Marciani, which are directed to using QS-21 to increase the immunogenicity of a viral peptide antigen.

The Examiner stated that the rejection of claims 135 and 136 under 35 U.S.C. §103(a) as being unpatentable over Wiegand (U.S. Patent No. 5,599,914, issued February 4, 1997) in view of Jennings (U.S. Patent No. 4,356,170, issued October 26, 1982), in view of Neurath (U.S. Patent No. 4,591,552, issued May 27, 1986), in view of Ratcliff (U.S. Patent No. 5,344,870, issued September 6, 1994), in view of Patrick (U.S. Patent No. 4,652,629, issued March

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24, 1987), in view of Blincko (U.S. Patent No. 5,256,409, issued October 26, 1993), in view of Marciani (Vaccine, 9:89-96 (February 1991)), in view of Tsuchida (Journal of the National Cancer Institute, 78:45-54 (1987)), in view of Ritter (Seminars in Cancer Biology, 2:401-409 (1991)), in view of Livingston (Proc. Natl. Acad. Sci. USA, 84:2911-2915 (May 1987)), and further in view of Diatlovitskaia (Biokhimiia, 56(3):560-564 (1991); Abstract only), is withdrawn in view of applicants' persuasive arguments that one of ordinary skill in the art would not have had a reasonable expectation of success in using QS-21 to increase the immunogenicity of a ganglioside conjugate in view of the teachings of Marciani, which are directed to using QS-21 to increase the immunogenicity of a viral peptide antigen.

#### **Provisional Obviousness-Type Double Patenting**

The Examiner provisionally rejected claims 123, 124, and 130-145 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the pending U.S. Application No. 08/196,154.

In response to this *provisional* rejection, applicants submit herewith a substitute Terminal Disclaimer, attached hereto as **EXHIBIT A**, with respect to any patent issuing from any one or more of copending U.S. Serial Nos. 08/475,784, 08/477,097 and/or 08/196,154.

Applicants point out that a Terminal Disclaimer with respect to U.S. Serial Nos. 08/475,784 and 08/477,097 was previously filed with a December 10, 2003 Amendment in

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connection with the subject application. Applicants submit the substitute Terminal Disclaimer to replace and supersede in all respects the Terminal Disclaimer filed December 10, 2003.

With the submission of the substitute Terminal Disclaimer, applicants respectfully request that that Examiner withdraw this provisional rejection to claims 123, 124, and 130-145.

**Rejection Under 35 U.S.C. §112, Second Paragraph (Indefiniteness)**

The Examiner rejected claims 123 and 130-145 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as an invention. Specifically, claims 123, 132, 134, and 135 are indefinite because they refer to a "ganglioside:Keyhole Limpet Hemocyanin" molar ratio as a characteristic of the conjugate, when the conjugate comprises a "ganglioside derivative" as described in the claims. The Examiner stated that this rejection would be obviated by amending claims 123, 132, 134, and 135 to recite: "ganglioside derivative:Keyhole Limpet Hemocyanin molar ratio...", and if the phrase ", the derivative of which is present in the conjugate", were removed, which phrase appears at the end of the claims.

In response to the Examiner's rejection, but without conceding the correctness thereof, applicants have hereinabove amended claims 123, 132, 134, and 135 to now recite: "ganglioside derivative:Keyhole Limpet Hemocyanin

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molar ratio...". Furthermore, claims 123, 132, 134, and 135, as amended, do not recite the phrase ", the derivative of which is present in the conjugate" at the end of the claims. Thus, applicants maintain that the Examiner's rejection to claims 123 and 130-145 has been obviated.

#### **Summary**

Applicants maintain that claims 123 and 130-145, as amended, herein are now in condition for allowance. Accordingly, a notice of allowance is respectfully requested.

If a telephone conference would be of assistance in advancing prosecution of the subject application, applicants' undersigned attorney invites the Examiner to telephone him at the number provided below.

Applicants: Philip O. Livingston and Friedhelm Helling  
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No fee is deemed necessary in connection with the filing of this Amendment. However, if any fee is required, authorization is hereby given to charge the amount of such fee to Deposit Account No. 03-3125.

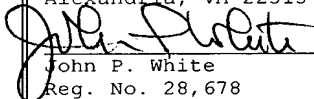
Respectfully submitted,



John P. White  
Registration No. 28,678  
Attorney for Applicants  
Cooper & Dunham LLP  
1185 Avenue of the Americas  
New York, New York 10036  
(212) 278-0400

I hereby certify that this correspondence is being deposited this date with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to:

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

 3/17/05  
John P. White Date  
Reg. No. 28,678

# Exhibit A



Dkt.43016-D/JPW/CY

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Philip O. Livingston and Friedhelm Helling  
Serial No.: 08/477,147 Examiner: A. Holleran  
Filed : June 7, 1995 Group Art Unit: 1642  
For : GANGLIOSIDE-KLH CONJUGATE VACCINES PLUS QS-21

1185 Avenue of the Americas  
New York, New York 10036

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

SIR:

TERMINAL DISCLAIMER

Sloan-Kettering Institute for Cancer Research, 1275 York Avenue, New York, New York 10021 ("Sloan-Kettering") is the Assignee of record of the entire right, title and interest in and to this application by virtue of an Assignment from Philip O. Livingston and Friedhelm Helling to Sloan-Kettering which was recorded in the U.S. Patent and Trademark Office on August 14, 1995 at Reel No. 7580, Frames 0708-0711, a copy of which is attached hereto as **EXHIBIT 1**.

Sloan-Kettering is also the Assignee of record of the entire right, title and interest in and to U.S. Serial No. 08/477,097, filed June 7, 1995, by virtue of an Assignment from Philip O. Livingston and Friedhelm Helling to Sloan-Kettering which was recorded in the U.S. Patent and Trademark Office on November 9, 1995 at Reel No. 7707, Frames 0968-0971, a copy of which is attached hereto as **EXHIBIT 2**.

Sloan-Kettering is also the Assignee of record of the entire right, title and interest in and to U.S. Serial No. 08/475,784,

Applicants: Philip O. Livingston and Friedhelm Helling  
Serial No.: 08/477,147  
Filed : June 7, 1995  
Page 2

filed June 7, 1995, by virtue of an Assignment from Philip O. Livingston and Friedhelm Helling to Sloan-Kettering which was recorded in the U.S. Patent and Trademark Office on November 13, 1995 at Reel No. 7742, Frames 0338-0341, a copy of which is attached hereto as **EXHIBIT 3**.

Sloan-Kettering is also the Assignee of record of the entire right, title and interest in and to U.S. Serial No. 08/196,154, filed November 16, 1995, by virtue of an Assignment from Philip O. Livingston and Friedhelm Helling to Sloan-Kettering which was recorded in the U.S. Patent and Trademark Office on January 21, 1994 at Reel No. 014168, Frames 0952-0955, a copy of which is attached hereto as **EXHIBIT 4**, in connection with PCT International Application No. PCT/US94/00757. U.S. Serial No. 08/196,154, is the \$371 national stage of PCT International Application No. PCT/US94/00757.

Sloan-Kettering previously filed a Terminal Disclaimer with respect to U.S. Serial Nos. 08/475,784 and 08/477,097 with a December 10, 2003 Amendment filed in connection with the subject application. Sloan-Kettering submits this Terminal Disclaimer to replace and supersede in all respects the Terminal Disclaimer filed December 10, 2003.

Sloan-Kettering now hereby disclaims, except as provided below, the terminal portion of the statutory term of any patent issued from the above-identified application which would extend beyond the earliest expiration date of the full statutory term, as defined in 35 U.S.C. §154 to §156 and §173, of any patent issuing from U.S. Serial Nos. U.S. Serial Nos. 08/475,784, 08/477,097 and/or 08/196,154, and hereby agrees that any patent issued from the present application shall be enforceable only

Applicants: Philip O. Livingston and Friedhelm Helling  
Serial No.: 08/477,147  
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for and during such period that the legal title to such patent shall be the same as the legal title to any patent issuing from U.S. Serial Nos. 08/475,784, 08/477,097 and/or 08/196,154, this agreement to run with any patent issued from the present application and to be binding upon the grantor, its successors and assignees.

In making the above disclaimer Sloan-Kettering does not disclaim the terminal part of any patent issued from the present application that would extend to the earliest expiration date of the full statutory term, as defined in 35 U.S.C. §154 to §156 and §173, of any patent issuing from U.S. Serial Nos. 08/475,784, 08/477,097 and/or 08/196,154 in the event that any patent issuing from U.S. Serial Nos. 08/475,784, 08/477,097 and/or 08/196,154 later: expires for failure to pay a maintenance fee, is found unenforceable, is found invalid by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 C.F.R. §1.321, has all claims canceled by a reexamination certificate, is reissued, or is in any manner terminated prior to the expiration of its full statutory term.

I have reviewed the assignments attached hereto as **EXHIBITS 1-4**, and certify that, to the best of my knowledge and belief, Sloan-Kettering has all right, title, and interest in and to the present application. I further certify that I am authorized to sign on behalf of the assignee, Sloan-Kettering.

Applicants: Philip O. Livingston and Friedhelm Helling  
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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issued thereon.

Date: 3/8/05

Sloan-Kettering Institute  
for Cancer Research

By: 

James S. Quirk  
Senior Vice-President,  
Research Resources Management  
Sloan-Kettering Institute  
for Cancer Research

# Exhibit 1



SP101AKC/MSK  
UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

DECEMBER 18, 1995

PTAS



COOPER & DUNHAM, LLP  
JOHN P. WHITE  
1185 AVENUE OF THE AMERICAS  
NEW YORK, NY 10036

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NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

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PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, NORTH TOWER BUILDING, SUITE 10C35, WASHINGTON, D.C. 20231.

RECORDATION DATE: 08/14/1995

REEL/FRAME: 7580/0708  
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:  
LIVINGSTON, PHILIP O.

DOC DATE: 06/30/1995

ASSIGNOR:  
HELLING, FRIEDHELM

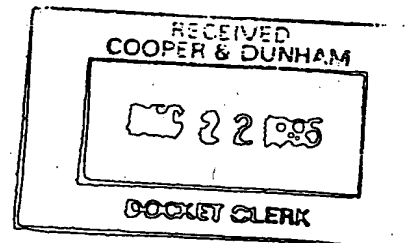
DOC DATE: 07/25/1995

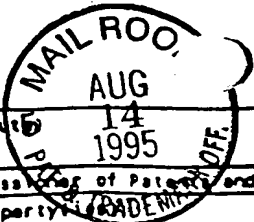
ASSIGNEE:  
SLOAN-KETTERING INSTITUTE FOR CANCER RESEARCH  
1275 YORK AVENUE  
NEW YORK, NEW YORK 10021

SERIAL NUMBER: 08477147  
PATENT NUMBER:

FILING DATE: 06/07/1995  
ISSUE DATE:

KEITH GOODE, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS





08-25-1995

No. 43016-D

FORM PTO-1595 (Substitute)  
(Rev. 6-93)



U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks  
1. Name of conveying party(ies):  
Philip O. Livingston and Friedhelm Helling

100050002  
2. Name and address of receiving party(ies):  
Sloan-Kettering Institute for Cancer Research

Additional name(s) of conveying party(ies) attached?  
☐ Yes ☒ No

Internal Address: \_\_\_\_\_  
Street Address: 1275 York Avenue

3. Nature of Conveyance:  
☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Other \_\_\_\_\_

City/State/Zip: New York, New York 10021

Execution Date: July 25, 1995 & June 30, 1995

Additional name(s) & address(es) attached?  
☐ Yes ☒ No

4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

A. Patent Application No.(s)  
U.S. Serial No. 08/477,147  
Filed June 7, 1995

B. Patent No.(s) \_\_\_\_\_

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: John P. White  
Internal Address: \_\_\_\_\_  
Street Address: Cooper & Dunham, LLP  
1185 Avenue of the Americas  
City/State/Zip: New York, New York 10036

6. Total number of applications and patents involved:  
☐ 1

7. Total fee (37 CFR 3.41): \_\_\_\_\_ \$ 40.00

☐ Enclosed  
☒ Authorized to be charged to deposit account

8. Deposit account number:  
03-3125

(Attach duplicate copy of this page if paying by deposit account)

#120392 08/21/95 08477147 03-3125 100 581 40.00CH

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9. Statement and signature.  
To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Albert Wai-Kit Chan  
Name of Person Signing

*Albert Wai-Kit Chan*  
Signature

8/11/95  
Date

I hereby certify that this paper is being deposited this date with the U.S. Postal Service as first class mail addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231.

*Albert Wai-Kit Chan* 8/11/95  
Albert Wai-Kit Chan Date  
Reg. No. 36,479

Total number of pages including cover sheet, attachments and document: 4

OMB No. 0651-0011 (exp. 4/94)

All documents to be recorded with required cover sheet information to:  
Commissioner of Patents and Trademarks, Box Assignments  
Washington, D.C. 20231

# Assignment

In consideration of One Dollar (\$1.00), and other good and valuable considerations, the receipt of which is hereby acknowledged, we, the undersigned,

Philip O. Livingston and Friedhelm Helling residing at 156 East 79th Street, New York, New York, 10021 and 504 East 63rd Street, Apartment 25N, New York, New York 10021 respectively,

Hereby sell, assign and transfer to Sloan-Kettering Institute for Cancer Research

New York

having a place of business at  
in the County of New York

a corporation of the State of  
1275 York Avenue

and State of New York

its successors, assigns and legal representatives, the entire right, title and interest for all countries, in and to any and all inventions which are disclosed and claimed, and any and all inventions which are disclosed but not claimed, in the application for United States Patent, which has been executed by the undersigned on July 25, 1995 and June 30, 1995 and is entitled

GANGLIOSIDE-KLH CONJUGATE VACCINE PLUS QS-21

(U.S. Serial No. 08/477,147, filed June 7, 1995, a continuation of PCT International Application No. PCT/US94/00757, filed January 21, 1994, which is a continuation of U.S. Serial No. 08/009,268, filed January 22, 1993)

and in and to said application and all divisional, continuing, substitute, renewal, reissue, and all other applications for U.S. Letters Patent or other related property rights in any and all foreign countries which have been or shall be filed on any of said inventions disclosed in said application; and in and to all original and reissued patents or related foreign documents which have been or shall be issued on said inventions;

Authorize and request the Commissioner of Patents of the United States to issue to said Assignee, the corporation above named, its successors, assigns and legal representatives, in accordance with this assignment, any and all United States Letters Patent on said inventions or any of them disclosed in said application;

Agree that said Assignee may apply for and receive foreign Letters Patent or rights of any other kind for said inventions, or any of them; and may claim, in applications for said foreign Letters Patent or other rights, the priority of the aforesaid United States patent application under the provisions of the International Convention of 1883 and later modifications thereof, under the Patent Cooperation Treaty, under the European Patent Convention or under any other available international agreement; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns and legal representatives, to carry out in good faith the intent and purpose of this assignment, the undersigned or the undersigned's executors or administrators will, for the United States and all foreign countries, execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications or other documents on any and all said inventions; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to said Assignee, its successors, assigns and representatives, all facts known and documents available to the undersigned relating to said inventions and the history thereof; testify in all legal proceedings; and generally do everything possible which said Assignee, its successors, assigns or representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said inventions and for vesting title to said inventions and all applications for patents or related foreign rights and all patents on said inventions, in said Assignee, its successors, assigns and legal representatives; and

Covenant with said Assignee, its successors, assigns and legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

Date: 6/30/95 19

Witness: Vera Hinkel

Vera Hinkel

45 Brooklyn Avenue

West Hempstead NY

11552

Date: \_\_\_\_\_ 19

Witness: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Philip Livingston [L.S.]  
Philip Livingston

Friedhelm Helling [L.S.]

Agree that said Assignee may apply for and receive foreign Letters Patent or rights of any other kind for said inventions, or any of them; and may claim, in applications for said foreign Letters Patent or other rights, the priority of the aforesaid United States patent application under the provisions of the International Convention of 1883 and later modifications thereof, under the Patent Cooperation Treaty, under the European Patent Convention or under any other available international agreement; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns and legal representatives, to carry out in good faith the intent and purpose of this assignment, the undersigned or the undersigned's executors or administrators will, for the United States and all foreign countries, execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications or other documents on any and all said inventions; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to said Assignee, its successors, assigns and representatives, all facts known and documents available to the undersigned relating to said inventions and the history thereof; testify in all legal proceedings; and generally do everything possible which said Assignee, its successors, assigns or representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said inventions and for vesting title to said inventions and all applications for patents or related foreign rights and all patents on said inventions, in said Assignee, its successors, assigns and legal representatives; and

Covenant with said Assignee, its successors, assigns and legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

Date: \_\_\_\_\_ 19\_\_\_\_ Philip O. Livingston [U.S.]

Witness: \_\_\_\_\_

Date: 7/25 1995

Witness: Monica Bocchia

MONICA BOCCHIA

504 E 63<sup>rd</sup> ST. APT 25N NEW YORK, NY, 10021

Friedhelm Helling [U.S.]

REST AVAILABLE COPY

ASSIGNMENT BY

PHILIP D. ALLAN, BOSTON, MA, and  
HARRY D. BELL, JR.,  
HALLAND, NJ

TO  
SIGAN-KELF, INC., BOSTON, MA, FOR CANCER  
RESEARCH

Application for Letters Patent  
of the United States for  
GANGLIOSIDE-RELATED COMPOUNDS AND  
PLUS QS-21

Attorney for John P. White

Cooper & Dunham, LLP  
1115 Avenue of the Americas  
New York, N.Y. 10036  
212-578-6400

## Exhibit 2



JDJ/msc/msk  
UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

MARCH 25, 1996

JOHN P. WHITE  
COOPER & DUNHAM L.L.P.  
1185 AVENUE OF THE AMERICAS  
NEW YORK, NY 10036

PTAS.



APR 1 1996

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PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, NORTH TOWER BUILDING, SUITE 10C35, WASHINGTON, D.C. 20231.

RECORDATION DATE: 11/09/1995

REEL/FRAME: 7707/0968  
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:  
LIVINGSTON, PHILIP O.

DOC DATE: 06/30/1995

ASSIGNOR:  
HELLING, FRIEDHELM

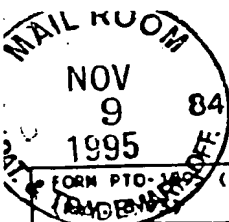
DOC DATE: 07/25/1995

ASSIGNEE:  
SLOAN-KETTERING INSTITUTE FOR CANCER RESEARCH  
1275 YORK AVENUE  
NEW YORK, NEW YORK 10021

SERIAL NUMBER: 08477097  
PATENT NUMBER:

FILING DATE: 06/07/1995  
ISSUE DATE:

JERYL MCDOWELL, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS



12-01-1995

Docket No. 43016-B



100098576

U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

FORM PTO-100 (Substitute)

To the Honorable Commissioner of Patents and Trademarks. Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Philip O. Livingston and Friedhelm Helling

Additional name(s) of conveying party(ies) attached?

☐ Yes ☒ No

3. Nature of Conveyance:

☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Other \_\_\_\_\_

Execution Date: July 25, 1995 and June 30, 1995

2. Name and address of receiving party(ies):

Sloan-Kettering Institute for  
Name: Cancer Research

Internal Address: \_\_\_\_\_

Street Address: 1275 York Avenue

City/State/Zip: New York, New York 10021

Additional name(s) & address(es) attached?

☐ Yes ☒ No

4. Application number(s) or patent number(s): If this document is being filed together with a new application,

the execution date of the application is: \_\_\_\_\_

A. Patent Application No.(s)

Serial No. 08/477,097 filed June 7, 1995

B. Patent No.(s)

Additional numbers attached?

☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: John P. White

Internal Address: \_\_\_\_\_

Street Address: Cooper & Dunham LLP

1185 Avenue of the Americas

City/State/Zip: New York, New York 10036

6. Total number of applications and patents involved:

☐ 1

7. Total fee (37 CFR 3.41): \$ 40.00

☐ Enclosed

☒ Authorized to be charged to deposit account

8. Deposit account number:

03-3125

(Attach duplicate copy of this page if paying by deposit account)

KK40014 11/28/95 08477097

03-3125 040 581

40.00CH

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Albert Wai-Kit Chan

Name of Person Signing

*Albert Wai-Kit Chan*  
Signature

11/7/95

Date

I hereby certify that this paper is being deposited this date with the U.S. Postal Service as first class mail addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231.

*Albert Wai-Kit Chan*  
Albert Wai-Kit Chan  
Reg. No. 36,479

Date

Total number of pages including cover sheet, attachments and document: 4

OMB No. 0651-0011 (exp. 4/94)

Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents and Trademarks, Box Assignments  
Washington, D.C. 20231

# Assignment

In consideration of One Dollar (\$1.00), and other good and valuable considerations, the receipt of which is hereby acknowledged, we, the undersigned,

Philip O. Livingston and Friedhelm Helling residing at 156 East 79th Street, New York, New York, 10021 and 504 East 63rd Street, Apartment 25N, New York, New York 10021 respectively,

Hereby sell, assign and transfer to Sloan-Kettering Institute for Cancer Research

New York

having a place of business at

in the County of New York

a corporation of the State of  
1275 York Avenue

and State of New York

its successors, assigns and legal representatives, the entire right, title and interest for all countries, in and to any and all inventions which are disclosed and claimed, and any and all inventions which are disclosed but not claimed, in the application for United States Patent, which has been executed by the undersigned on 6/30/95 and 7/25/95 and is entitled

GANGLIOSIDE-KLH CONJUGATE VACCINE PLUS QS-21

(U.S. Serial No. 08/477,097, filed June 7, 1995, a continuation of PCT International Application No. PCT/US94/00757, filed January 21, 1994, which is a continuation of U.S. Serial No. 08/009,268, filed January 22, 1993)

and in and to said application and all divisional, continuing, substitute, renewal, reissue, and all other applications for U.S. Letters Patent or other related property rights in any and all foreign countries which have been or shall be filed on any of said inventions disclosed in said application; and in and to all original and reissued patents or related foreign documents which have been or shall be issued on said inventions;

Authorize and request the Commissioner of Patents of the United States to issue to said Assignee, the corporation above named, its successors, assigns and legal representatives, in accordance with this assignment, any and all United States Letters Patent on said inventions or any of them disclosed in said application;

Agree that said Assignee may apply for and receive foreign Letters Patent or rights of any other kind for said inventions, or any of them; and may claim, in applications for said foreign Letters Patent or other rights, the priority of the aforesaid United States patent application under the provisions of the International Convention of 1883 and later modifications thereof, under the Patent Cooperation Treaty, under the European Patent Convention or under any other available international agreement; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns and legal representatives, to carry out in good faith the intent and purpose of this assignment, the undersigned or the undersigned's executors or administrators will, for the United States and all foreign countries, execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications or other documents on any and all said inventions; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to said Assignee, its successors, assigns and representatives, all facts known and documents available to the undersigned relating to said inventions and the history thereof; testify in all legal proceedings; and generally do everything possible which said Assignee, its successors, assigns or representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said inventions and for vesting title to said inventions and all applications for patents or related foreign rights and all patents on said inventions, in said Assignee, its successors, assigns and legal representatives; and

Covenant with said Assignee, its successors, assigns and legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

Date: 6/30/95 19

Philip Livingston [L.S.]  
Philip P. Livingston

Witness: Vera Hinck

Vera Hinck  
45 Brooklyn Avenue  
West Hempstead NY 11550

Date: \_\_\_\_\_ 19

Friedhelm Helling [L.S.]

Witness: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Agree that said Assignee may apply for and receive foreign Letters Patent or rights of any other kind for said inventions, or any of them; and may claim, in applications for said foreign Letters Patent or other rights, the priority of the aforesaid United States patent application under the provisions of the International Convention of 1883 and later modifications thereof, under the Patent Cooperation Treaty, under the European Patent Convention or under any other available international agreement; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns and legal representatives, to carry out in good faith the intent and purpose of this assignment, the undersigned or the undersigned's executors or administrators will, for the United States and all foreign countries, execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications or other documents on any and all said inventions; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to said Assignee, its successors, assigns and representatives, all facts known and documents available to the undersigned relating to said inventions and the history thereof; testify in all legal proceedings; and generally do everything possible which said Assignee, its successors, assigns or representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said inventions and for vesting title to said inventions and all applications for patents or related foreign rights and all patents on said inventions, in said Assignee, its successors, assigns and legal representatives; and

Covenant with said Assignee, its successors, assigns and legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

Date: \_\_\_\_\_ 19 \_\_\_\_\_ Philip O. Livingston [L.S.]  
Witness: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Date: 7.25. 1995 Friedhelm Helling [L.S.]  
Witness: Friedhelm Helling

MONICA BOCCIA  
504 E 63<sup>rd</sup> STREET APT 5N  
NEW YORK, NY 10021

BEST AVAILABLE COPY

SECRET

UNITED STATES DEPARTMENT OF THE ARMY  
HEADQUARTERS  
WASHINGTON, D.C. 20315

REPORT OF THE ARMY MEDICAL DEPARTMENT  
ON THE RESULTS OF THE SURVEY OF  
CANCER INCIDENCE

ABSTRACT OF THE REPORT OF THE ARMY  
MEDICAL DEPARTMENT ON THE RESULTS OF THE  
SURVEY OF CANCER INCIDENCE  
PUBS (OS-2)

ADDITIONAL INFORMATION

George A. Dunbar, Jr.  
Director of the Survey of Cancer Incidence

21-27-60

10/1/60

## Exhibit 3

AKC



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

APRIL 07, 1996

COOPER & DUNHAM LLP  
ALBERT WAI-KIT CHAN  
1185 AVENUE OF THE AMERICAS  
NEW YORK, NY 10036

PTAS

RECEIVED  
COMM. & TRADEMARKS

APR 15 1996

DOCKET CLERK



\*100111931A\*

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, NORTH TOWER BUILDING, SUITE 10C35, WASHINGTON, D.C. 20231.

RECORDATION DATE: 11/13/1995

REEL/FRAME: 7742/0338  
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:  
LIVINGSTON, PHILIP O.

DOC DATE: 07/25/1995

ASSIGNOR:  
HELLING, FRIEDHELM

DOC DATE: 06/30/1995

ASSIGNEE:  
SLOAN-KETTERING INSTITUTE FOR CANCER RESEARCH  
1275 YORK AVENUE  
NEW YORK, NEW YORK 10021

SERIAL NUMBER: 08475784  
PATENT NUMBER:

FILING DATE: 06/07/1995  
ISSUE DATE:

DOROTHY RILEY, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

12-29-1995

No. 43016-C

FORM PTO-1595 (Substitute)  
(Rev. 6-93)

RECORDED

U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
documents or copy thereof.  
receiving party(ies):

To the Honorable Commissioner of Patents and Trade

1. Name of conveying party(ies):  
O. Livingston and Friedhelm Helling2. Additional name(s) of conveying party(ies) attached?  
☐ Yes ☒ No

3. Nature of Conveyance:

- ☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Other \_\_\_\_\_

Execution Date: July 25, 1995 and June 30, 1995

100111931

Sloan-Kettering Institute for  
Name: Cancer Research

Internal Address: \_\_\_\_\_

Street Address: 1275 York Avenue

City/State/Zip: New York, New York 10021

Additional name(s) &amp; address(es) attached?

☐ Yes ☒ No

4. Application number(s) or patent number(s): If this document is being filed together with a new application,

the execution date of the application is:

A. Patent Application No.(s)

U.S. Serial No. 08/475,784  
Filed June 7, 1995

B. Patent No.(s)

Additional numbers attached?

☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: John P. White

Internal Address: \_\_\_\_\_

Street Address: Cooper &amp; Dunham LLP

1185 Avenue of the Americas

City/State/Zip: New York, New York 10036

6. Total number of applications and patents involved:

☐ 1

7. Total fee (37 CFR 3.41): . . . . . \$ 40.00

☐ Enclosed☒ Authorized to be charged to deposit account

8. Deposit account number:

03-3125

(Attach duplicate copy of this page if paying by deposit account)

WT10053 11/29/95 08475784

03-3125 100 581

40.00CH

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Albert Wai-Kit Chan

Name of Person Signing

*Albert Wai Kit Chan*

Signature

11/9/95

Date

I hereby certify that this paper is being deposited this date with the U.S. Postal Service as first class mail addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231.

Total number of pages including cover sheet, attachments and document: 4

*Albert Wai Kit Chan* 11/9/95  
Albert Wai-Kit Chan Date  
Reg. No. 36,479

OMB No. 0651-0011 (exp. 6/94)

All documents to be recorded with required cover sheet information to:  
Commissioner of Patents and Trademarks, Box Assignments  
Washington, D.C. 20231

# Assignment

In consideration of One Dollar (\$1.00), and other good and valuable considerations, the receipt of which is hereby acknowledged, we, the undersigned,

Philip O. Livingston and Friedhelm Helling residing at 156 East 79th Street, New York, New York, 10021 and 504 East 63rd Street, Apartment 25N, New York, New York 10021 respectively,

Hereby sell, assign and transfer to Sloan-Kettering Institute for

Cancer Research

New York

having a place of business at  
in the County of New York

a corporation of the State of

1275 York Avenue

and State of New York

its successors, assigns and legal representatives, the entire right, title and interest for all countries, in and to any and all inventions which are disclosed and claimed, and any and all inventions which are disclosed but not claimed, in the application for United States Patent, which has been executed by the undersigned on July 25, 1995 and June 30, 1995 and is entitled

GANGLIOSIDE-KLH CONJUGATE VACCINE PLUS QS-21

(U.S. Serial No. 08/475,784, filed June 7, 1995, a continuation of PCT International Application No. PCT/US94/00757, filed January 21, 1994, which is a continuation of U.S. Serial No. 08/009,268, filed January 22, 1993)

and in and to said application and all divisional, continuing, substitute, renewal, reissue, and all other applications for U.S. Letters Patent or other related property rights in any and all foreign countries which have been or shall be filed on any of said inventions disclosed in said application; and in and to all original and reissued patents or related foreign documents which have been or shall be issued on said inventions;

Authorize and request the Commissioner of Patents of the United States to issue to said Assignee, the corporation above named, its successors, assigns and legal representatives, in accordance with this assignment, any and all United States Letters Patent on said inventions or any of them disclosed in said application;

Agree that said Assignee may apply for and receive foreign Letters Patent or rights of any other kind for said inventions, or any of them; and may claim, in applications for said foreign Letters Patent or other rights, the priority of the aforesaid United States patent application under the provisions of the International Convention of 1883 and later modifications thereof, under the Patent Cooperation Treaty, under the European Patent Convention or under any other available international agreement; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns and legal representatives, to carry out in good faith the intent and purpose of this assignment, the undersigned or the undersigned's executors or administrators will, for the United States and all foreign countries, execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications or other documents on any and all said inventions; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to said Assignee, its successors, assigns and representatives, all facts known and documents available to the undersigned relating to said inventions and the history thereof; testify in all legal proceedings; and generally do everything possible which said Assignee, its successors, assigns or representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said inventions and for vesting title to said inventions and all applications for patents or related foreign rights and all patents on said inventions, in said Assignee, its successors, assigns and legal representatives; and

Covenant with said Assignee, its successors, assigns and legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

Date: 6/30/95 19 Philip Livingston [L.S.]  
Philip O. Livingston

Witness: Vera Hinck  
Vera Hinck  
45 Brooklyn Avenue  
West Hempstead, NY 11550

Date: \_\_\_\_\_ 19 Friedhelm Helling [L.S.]  
Witness: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Agree that said Assignee may apply for and receive foreign Letters Patent or rights of any other kind for said inventions, or any of them; and may claim, in applications for said foreign Letters Patent or other rights, the priority of the aforesaid United States patent application under the provisions of the International Convention of 1883 and later modifications thereof, under the Patent Cooperation Treaty, under the European Patent Convention or under any other available international agreement; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns and legal representatives, to carry out in good faith the intent and purpose of this assignment; the undersigned or the undersigned's executors or administrators will, for the United States and all foreign countries, execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications or other documents on any and all said inventions; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to said Assignee, its successors, assigns and representatives, all facts known and documents available to the undersigned relating to said inventions and the history thereof; testify in all legal proceedings; and generally do everything possible which said Assignee, its successors, assigns or representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said inventions and for vesting title to said inventions and all applications for patents or related foreign rights and all patents on said inventions, in said Assignee, its successors, assigns and legal representatives; and

**Covenant** with said Assignee, its successors, assigns and legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

Date: \_\_\_\_\_ 19 \_\_\_\_\_ Philip O. Livingston [L.S.]

Witness: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date: 7.25 1995

Witness: Monica Bocchia

MONICA BOCCHIA

504 E 63<sup>rd</sup> St. Apt 25 N NEW YORK, NY 10021

Friedhelm Helling [L.S.]  
Friedhelm Helling

## Exhibit 4

43016-A-PCT

JPW



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND  
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

DECEMBER 08, 2003

COOPER & DUNHAM  
JOHN P. WHITE, ESQ.  
30 ROCKEFELLER PLAZA  
NEW YORK, NY 10112

PTAS

DEC 12 2003

FORRESTER

NFL



\*102585334A\*

UNITED STATES PATENT AND TRADEMARK OFFICE  
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THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 01/21/1994

REEL/FRAME: 014168/0952  
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:  
LIVINGSTON, PHILIP O.

DOC DATE: 01/21/1994

ASSIGNOR:  
HELLING, FRIEDHELM

DOC DATE: 01/21/1994

ASSIGNEE:  
SLOAN-KETTERING INSTITUTE FOR  
CANCER RESEARCH  
1275 YORK AVENUE  
NEW YORK, NEW YORK 10021SERIAL NUMBER: 08481809  
PATENT NUMBER:  
PCT NUMBER: US9400757FILING DATE: 06/07/1995  
ISSUE DATE:

014168/0952 PAGE 2

SEDLEY PYNE, PARALEGAL  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

12-02-2003

1525

PAGE 8/12

FORM PTO-1595 (Substitute)

(Rev. 6-93)



102585334

U.S. DEPARTMENT OF COMMERCE

Patent and Trademark Office

Send original documents or copy thereof.

To the Honorable Commissioner of Patents

1. Name of conveying party(ies):

Philip O. Livingston and Friedhelm Helling

1/21/94

Additional name(s) of conveying party(ies) attached?

☐ Yes ☒ No

2. Nature of Conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other

Execution Date: January 21, 1994

Name of receiving party(ies):

Sloan-Kettering Institute for  
Cancer Research

Internal Address:

Street Address: 1275 York Avenue

City/State/Zip: New York, New York 10021

Additional name(s) &amp; address(es) attached?

☐ Yes ☒ No

4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application is: January 21, 1994

A. Patent Application No.(s)

PCT/US 94/00757

B. Patent No.(s)

Additional numbers attached?

☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: John P. White, Esq.

Internal Address:

Street Address: Cooper &amp; Dunham

30 Rockefeller Plaza

City/State/Zip: New York, New York 10112

6. Total number of applications and patents involved:

1

7. Total fee (37 CFR 3.41): 40.00

☐ Enclosed☒ Authorized to be charged to deposit account

8. Deposit account number:

03-3125

Fee Pd.

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Robert J. Cobert, Esq.

January 21, 1994

Name of Person Signing  
Reg. No. 36,108

Signature

Date

Total number of pages including cover sheet, attachments  
and document: 5

OMB No. 0651-0011 (exp. 4/94)

Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents and Trademarks, Box 1000, Washington, DC 20540

ASSIGNMENT

In consideration of One Dollar (\$1.00), and other good and valuable considerations, the receipt of which is hereby acknowledged, we, the undersigned,

Philip O. Livingston and Friedhelm Helling, residing at 156 East 79th Street, Apartment 6C, New York, New York, 10021, U.S.A; and 303 East 71st Street, Apartment 6H, New York, New York, 10021, U.S.A., respectively,

Hereby sell, assign and transfer to Sloan-Kettering Institute for Cancer Research a corporation of the state of New York having a place of business at 1275 York Avenue, in the County of New York and State of New York 10021, U.S.A., its successors, assigns and legal representatives, the entire right, title and interest for all countries, in and to any and all inventions which are disclosed and claimed, and any and all inventions which are disclosed but not claimed, in the PCT International Application, which has been executed by the undersigned on 21 January 1994 and is entitled

GANGLIOSIDE-KLH CONJUGATE VACCINES PLUS QS-21

(PCT International Application claiming priority of U.S. Serial No. 08/009,268, filed January 22, 1993, and designating the United States of America (as a continuation-in-part))

and in and to said PCT International Application and all divisional, continuing, substitute, renewal, reissue, and all other applications for U.S. Letters Patent or other related property rights in any and all foreign countries which have been or shall be filed on any of said inventions disclosed in said PCT International Application; and in and to all original and reissued patents or related foreign documents which have been or shall be issued on said inventions;

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Covenant with said Assignee, its successors, assigns and legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

Date: 1/21/94 19

Philip Livingston [L.S.]  
Philip O. Livingston

Witness Christine Hannon  
Christine Hannon  
401 E 74<sup>th</sup> St  
NY 10021

Date: 1/21/94 19

Friedhelm Helling [L.S.]  
Friedhelm Helling

Witness Christine Hannon  
Christine Hannon  
401 E 74<sup>th</sup> St  
NY 10021